

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

Claim 1 (original): A method comprising:  
receiving a satellite signal spectrum in a receiver; and  
determining a local oscillator (LO) frequency for a signal channel within the satellite signal spectrum, the LO frequency being away from a center of a widest signal channel by greater than half of a signal band of the widest signal channel and less than half of a passband width of a baseband filter of the receiver.

Claim 2 (original): The method of claim 1, further comprising selecting the LO frequency from a first LO selection region and a second LO selection region, each of which are adjacent to a signal channel.

Claim 3 (original): The method of claim 2, further comprising selecting the LO frequency to be outside of the signal band of the signal channel by at least a first amount to avoid  $1/f$  noise and a DC offset effect.

Claim 4 (original): The method of claim 1, further comprising determining an error value corresponding to a frequency error of a LO generating the LO frequency.

Claim 5 (original): The method of claim 4, further comprising storing the error value in a storage medium.

Claim 6 (original): The method of claim 1, wherein the baseband filter has a smallest passband width that is wider than a width of the widest signal channel and half of a LO-step frequency, wherein the receiver comprises one tuner.

Claim 7 (original): The method of claim 1, further comprising:

mixing the satellite signal spectrum with the LO frequency to obtain a downmixed signal;  
and  
filtering the downmixed signal using the baseband filter.

Claim 8 (original): The method of claim 7, further comprising selecting the LO frequency to cause a center frequency of the downmixed signal to be at a center of a passband of the baseband filter.

Claim 9 (original): The method of claim 1, further comprising determining a new LO frequency for a new signal channel within the satellite signal spectrum, the new LO frequency being outside of a signal band of the new signal channel and an offset region surrounding the new signal channel.

Claim 10 (original): The method of claim 9, further comprising selecting the new LO frequency so that it does not interfere with one or more existing LO frequencies.

Claim 11 (original): The method of claim 10, further comprising selecting the new LO frequency from a LO candidate selection region that is outside a crosstalk region surrounding the one or more existing LO frequencies.

Claim 12 (original): The method of claim 11, wherein the LO candidate selection region is outside a crosstalk region surrounding harmonics of the one or more existing LO frequencies.

Claim 13 (original): The method of claim 11, further comprising maintaining parameters of existing signal channels when tuning the new signal channel.

Claims 14 – 25 (canceled)

Claim 26 (original): An apparatus comprising:  
a first tuner to receive a satellite signal spectrum;

a first oscillator to generate a first local oscillator (LO) frequency to be mixed with the satellite signal spectrum to obtain a first signal channel; and

a selection circuit to determine the first LO frequency, wherein the first LO frequency is outside of a signal band of the first signal channel and within a passband width of a first baseband filter of the first tuner.

Claim 27 (original): The apparatus of claim 26, further comprising:

a second tuner to receive the satellite signal spectrum; and

a second oscillator to generate a second LO frequency to be mixed with the satellite signal spectrum to obtain a second signal channel.

Claim 28 (original): The apparatus of claim 27, wherein the selection circuit is adapted to determine a new LO frequency, wherein the new LO frequency does not interfere with an existing LO frequency.

Claim 29 (original): The apparatus of claim 28, wherein the selection circuit determines the new LO frequency based on a crosstalk region of the existing LO frequency and a frequency location of an existing signal channel and a new signal channel.

Claim 30 (original): The apparatus of claim 27, further comprising:

a third tuner to receive the satellite signal spectrum; and

a third oscillator to generate a third LO frequency to be mixed with the satellite signal spectrum to obtain a third signal channel.

Claim 31 (original): The apparatus of claim 30, wherein the selection circuit is adapted to determine the third LO frequency, wherein the third LO frequency does not interfere with the first LO frequency or the second LO frequency, wherein the apparatus comprises three tuners.

Claim 32 (original): The apparatus of claim 30, wherein the selection circuit is adapted to select one of the first LO frequency or the second LO frequency for use in obtaining the third

signal channel from the satellite signal spectrum, wherein the apparatus further comprises a multiplexer.

Claim 33 (original): The apparatus of claim 30, further comprising:  
a fourth tuner to receive the satellite signal spectrum; and  
a fourth oscillator to generate a fourth LO frequency to be mixed with the satellite signal spectrum to obtain a fourth signal channel.

Claim 34 (original): The apparatus of claim 33, wherein the selection circuit is adapted to determine the fourth LO frequency, wherein the fourth LO frequency does not interfere with the first LO frequency, the second LO frequency, or the third LO frequency.

Claim 35 (original): The apparatus of claim 33, wherein the selection circuit is adapted to select one of the first LO frequency, the second LO frequency, or the third LO frequency for use in obtaining the fourth signal channel from the satellite signal spectrum, wherein the apparatus further comprises a multiplexer.

Claim 36 (original): The apparatus of claim 33, wherein the first tuner, the second tuner, the third tuner, and the fourth tuner are adapted on a single integrated circuit.

Claims 37 – 42 (canceled)